Table 1: Baseline Characteristics.

Characteristics	Overall (n=359)	Progressors (n=220)	Non-progressors (n=139)	P-value
Age	55.8±8.9	59.2±8.7	50.2±9.3	0.04
BMI	26.0(23.4-29.6)	26.9(23-29.6)	25(24.3-29.0)	0.5
Hypertension (%)	91.7	95.2	63.0	0.001
Dyslipidemia (%)	23.2	24.2	21	0.325
Proteinuria (%)	86.7	77.7	25.3	0.00
24 hr protein(g/day)	1.8(0.6-4.0)	2.0(0.8-4.4)	0.85(0.36-1.8)	0.001
GFR-Decline	20 ml/1.73 m^2/year (8-40)	12 ml/1.73 m^2/year (8.5-19.3)	1.6 ml/1.73 m^2/year (0-3.3)	0.001
CKD stages(%)				0.003
G1	19.7	17	26.7	
G2	22.5	23	20.8	
G3a	21.7	24.3	14.9	
G3b	15.3	17.4	10.9	
G4	20.3	18.1	25.7	
Diabetic retinopathy(%)	25.8	31.2	12	0.007
Diabetic neuropathy(%)	25	28	23.8	0.4
CVD(%)	40.8	45.8	28.3	0.04
CVA(%)	10.6	12.1	10	0.5
PVD(%)	6.9	8.1	4.1	0.17
AKI-Episodes(%)	50.8	57.3	34.3	0.001

Table 2: Prediction of Risk factors.

Parameters	Odds Ratio	95% CI	P value
Proteinuria	4.7	2.2-9.88	0.001
Diabetic retinopathy	0.24	0.1-0.5	0.01
AKI episodes	2.18	1.2-3.7	0.003

#4179

DIFFERENCES IN PROTOCOLS FOR MEASURING GLOMERULAR FILTRATION RATE USING IOHEXOL

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Background and Aims: When assessing kidney function, measurement of glomerular filtration rate (mGFR) using an exogenous marker such as iohexol is the gold standard. In this study, we aim to identify similarities and differences between iohexol-based mGFR protocols.

Method: Detailed data on iohexol measurement protocols were obtained using a standardized survey sent to centres in Europe and the US. It was completed by 15 participants. Data are reported as number and percentage (n, %).

Results: In the participating centres, measurements are performed after referral by a nephrologist (n=6, 40%), other specialties (n=5, 33%) or for research purposes (n=4, 27%). Most common indications for mGFR are evaluation of kidney donors (n=5, 33%), drug dosing (n=4, 27%), abnormal body composition (n=3, 20%) and transplant evaluation (n=4, 27%). Most participants perform measurements in the morning (n=10, 67%), with patients withholding caffeine (n=5, 33%), fasting (n=4, 27%) or avoiding heavy meals (n=3, 20%). Most centres use an IV iohexol dose of 5 mL 300 mg I/mL (n=10, 67 %) or a dose based on weight (n=2, 13%). The timing of sample collection is shown in Figure 1, most often a single sample per time point (n=12, 80%). Iohexol is measured by LC-MS (n=8, 53%) or LC-UV (n=7, 47%). Within-assay variability ranges between <2% (n=3, 20%) and 6-8% (n=1, 7%) and the between-assay variability ranges between <2% (n=2, 13%) and 6-8% (n=2, 13%). When asked about assumptions and corrections, most centres make a one-compartment assumption in their PK model (n=8, 53%), others making two-compartment (n=2, 13%) or measurement-dependent (n=1, 7%) assumptions. mGFR is standardized for body surface area according to the DuBois-formula (n=6 (40%), Haycock and Schwarz formula (n=2, 13%) or not-specified (n=7, 47%). Some participants correct their measurements for eGFR (n=9, 60 %). Most centres participate in external quality control (Equalis, n=12, 80%).

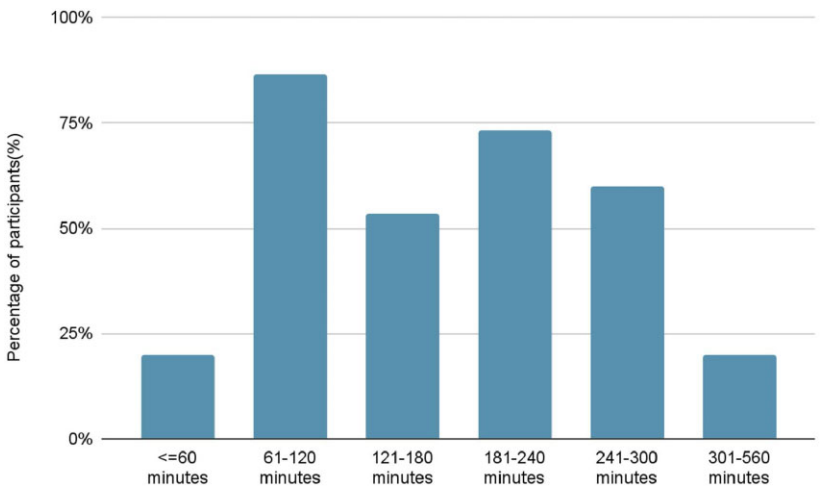

Figure 1: Timing of samples after iohexol administration. Samples are drawn within the first hour (n=3, 20%), between 1-2 hours (n=13, 87%), 2-3 hours (n=8, 53%), 3-4 hours (n=11, 73%), 4-5 hours (n=9, 60%) or 5-7 hours (n=3, 20%) after iohexol administration.

Conclusion: There is a large variation in protocols for iohexol-based mGFR, which highlights the need for a standardized mGFR protocol before widespread use in clinical routine.

#3788

PROGNOSTIC ROLE OF THE NEUTROPHIL-TO-LYMPHOCYTE RATIO IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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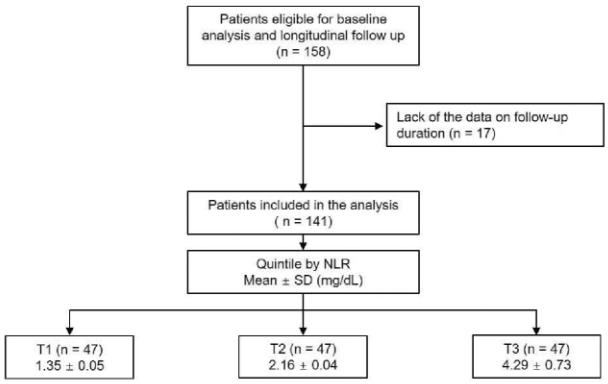
Background and Aims: The neutrophil-to-lymphocyte ratio (NLR) has been demonstrated to have prognostic value in cardiovascular disease, infection, inflammatory disease, and several types of cancer. Therefore, it is expected that NLR has predictive value in patients with chronic kidney disease (CKD) but it has not been validated. Here, I aimed to investigate the possibility of NLR as a predictor of progression of CKD.

Method: This retrospective observational study included 141 patients with non-dialysis CKD. Subjects were divided into terciles (T1, T2, and T3) according to NLR. The primary outcome of interest was defined as a composite renal event, which included a decline in the estimated glomerular filtration rate (eGFR) of at least 50% or onset of end-stage renal disease (ESRD) during the follow-up period.

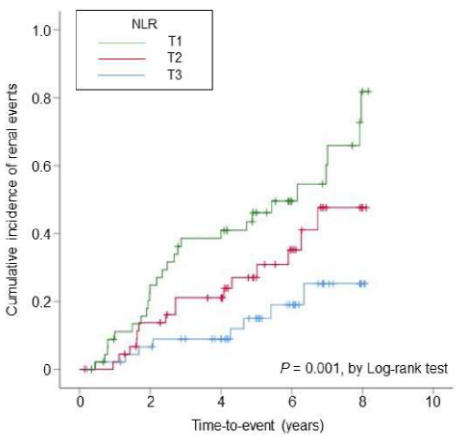
Results: The median follow-up duration was 5.45 ± 2.11 years. The median NLR for each group was 1.35 ± 0.05 in T1 (n=47), 2.16 ± 0.04 in T2 (n=47) and 4.29 ± 0.73 in T3 (n=47). The group with the highest NLR (T3) had higher baseline CKD and serum creatinine and lower eGFR levels than the group with the lowest NLR (T1). The cumulative incidence of composite renal events was significantly increased in T3, compared to T1 ($p < 0.001$, log-rank test). Cox regression analysis revealed that high NLR was independently associated with the risk of composite renal events (adjusted hazard ratio 2.85, 95% confidence interval 1.18-6.93).

Conclusion: A higher NLR reflects the more advanced stage of CKD and suggests that a role for NLR as a biomarker for predicting CKD progression.



Abbreviations: NLR, neutrophil-to-lymphocyte ratio; T1, 1st tercile; T2, 2nd tercile, T3, 3rd tercile.

Figure 1: Flow diagram of the study participants.



Abbreviations: NLR, neutrophil-to-lymphocyte ratio; T1, 1st tercile; T2, 2nd tercile, T3, 3rd tercile.

Figure 2A: Kaplan-Meier survival curve for cumulative incidence of renal events by Neutrophil-to-Lymphocyte ratio.